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EXAMINER
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BLAU, STEPHEN LUTHER

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3711

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/072,429  
Filing Date: February 07, 2002  
Appellant(s): FAGOT, JACQUES

**MAILED**  
**JUN 15 2006**  
**Group 3700**

Roger W. Parkhurst (Reg. No. 25,177)  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 6 April 2006 appealing from the Office action mailed 28 March 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after the last final office action dated 28 March 2005 has been filed. The statement in the appeal brief is discussing an amendment dated 16 February 2005 filed prior to the last final office action which is not the intent of this section in the appeal brief (See article 1205.02 (iv)). It is agreed however that the amendment filed 16 February 2005 was filed after an earlier final office action dated 2 December 2003 and this amendment has been entered.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,093,112	PETERS et al	7-2000
5,643,112	BESNARD et al	7-1997
5,290,036	FENTON et al	3-1994

JP 7-213656, "Iron Golf Club Head", publication date 15 August 1995,  
DAISUKE, SANPEI et al.

The following is the prior art not relied on but cited as to develop what is known in the art by one skilled in the art at the time of the invention. The examiner used these findings to conclude the meaning of prior art references relied on to persons of ordinary skill in the art and the motivation those references would provide to such persons (In re Berg, 65 USPQ2d 2003 (Fed. Cir. 2003)).

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**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 8, 11-12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters in view of Besnard.

Peters discloses a set of club irons each iron of a set having a head, a head having a rear face, a rear face having a cavity bounded by a plurality of walls, wherein a plurality of walls comprises at least one lower wall forming a sole and an upper wall, an upper wall having a plurality of faces, a plurality of faces comprises a rear face, an upper face (Figs. 20-22), a lower face facing the cavity and a plurality of lateral faces, at least one recess in the lower wall in the form of where weight inserts attached (Ref. Nos. 174, 176, 178), a recess being elongated in a main direction of a lower wall (Ref. Nos. 174, 176, 178) at least one recess opens onto a rear face of a lower wall, away

Art Unit: 3711

from the upper and lower faces of the lower wall, wherein a volume of at least one recess varies from one iron to another, a volume of all the recesses changing, number of recesses changing (Figs. 20, 22), a recess being a small amount compared to the volume of a head (Figs. 20, 22), a set having a center of gravity varying in distance relative to an upper face of an upper wall from one iron to another, and a center of gravity increasing in height from long irons to short irons (Figs. 30-31, Fig. 28, Col. 14, Lns. 60-61), and a set comprising at least three clubs (Figs. 1, 15). Peters does not specifically state that adding additional recesses or additional volume of recesses with weight inserts as shown between figures 20 and 22 would change the center of gravity but clearly an artisan skilled in forming a set of irons with different center of gravities as shown in figures 30-31 would have selected a suitable way to adjust weight distribution in the vertical direction in which using additional recesses of the same volume with weight inserts between irons in a set are included.

Peters lacks at least one recess in the upper wall and said at least one recess opens onto a rear face of an upper wall, recess being elongated in a main direction of an upper wall, a volume of the recess being between .4 and 5 % of the volume of the head, a volume of said at least one recess inside an upper wall varies from one iron to another within a set causing a gravity of each head to vary in distance relative to an upper face from one iron to another, the number of recesses or volume of recesses decreasing from long irons to short irons, and a set comprising at least three clubs.

It would have been obvious to modify the set of irons of Peters to have a volume of said at least one recess inside a lower wall varies from one iron to another within a

set to cause a center of gravity of each head to vary in distance relative to an upper face of an upper wall from one iron to another and the number of recesses or volume changing from long irons to short irons in order to have weights added more protected by being in an insert compared to being attached to a sole as shown in figure 3 of Peters.

Besnard discloses at least one recess in the upper wall and said at least one recess opens onto a rear face of an upper wall, a recess being elongated in a main direction of an upper wall, and a volume of the recesses compared to a head (Figs. 9-10, 12) in order to position the center of gravity lower (Col. 2, Lns. 37-36). Besnard does not specifically state the volume of the recesses compared to a head volume as claimed but clearly there is one as shown in the figures an artisan skilled in forming a head with a low center of gravity using recesses in an upper wall would have selected a suitable volume for the recesses in which a volume of the recess being between .4 and 5 % of the volume of the head is included. In view of the patent of Besnard it would have been obvious to modify the set of irons of Peters to have at least one recess in the upper wall instead of the lower wall and said at least one recess opens onto a rear face of an upper wall, a recess being elongated in a main direction of an upper wall and wherein a volume of said at least one recess inside an upper wall varies from one iron to another within a set causing a gravity of each head to vary in distance relative to an upper face from one iron to another and the number of recesses or volume of recesses decreasing from long irons to short irons in order to simplify the assembly process by having fewer parts (i.e. no weight inserts). In view of the patent of Besnard it would

have been obvious to modify the set of irons of Peters to have a volume of the recess being between .4 and 5 % of the volume of the head in order to have a sufficient amount of weight removed from a top of a head to lower the center of gravity a sufficient distance. In view of the patent of Besnard it would have been obvious to modify the set of irons of Peters to have a set comprising at least three clubs in order to utilize the method of adjusting the center of gravity vertically minimizing the number of different materials for more than just two clubs.

3. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters in view of Besnard as applied to claims 1, 8, 11-12, and 16 above, and further in view of JP 07213656 and Fenton.

Peters lacks the recess being filled with a low-density material of polyurethane foam. JP 072113656 discloses mounting impact absorbing material on a top edge of a back of an iron to improve feeling (Abstract, Constitution). Fenton discloses an impact absorbing material placed in a recess on a back of an iron being polyurethane (Abstract) in order to have a softness and elasticity to create a substantial lessening of vibration while still having a toughness to prevent abrasion from scratching with resultant damage to clubs (Col. 1, Lns. 24-40). In view of the reference of JP 072113656 it would have been obvious to have the recess being filled with a low-density material in order to improve feeling by absorbing vibrations. In view of the reference of Fenton it would have been obvious to have the recess being filled with polyurethane material in order to have a softness and elasticity to create a substantial



lessening of vibration while still having a toughness to prevent abrasion from scratching with resultant damage to clubs.

#### **(10) Response to Argument**

In the arguments filed 6 April 2006, the appellant argues:

1. It is improper to use the reference of Peters since Peters produces a completed head with no recesses after inserting a weight in an incomplete head.
2. It is improper to use the reference of Peters since Peters in no way suggests the specific structure of the upper wall of each cavity-back, iron-type golf club head as claimed.
3. It is improper to use the reference of Peters since Peters nowhere even remotely suggests changing the location of the center of gravity of a club head in a set of clubs by specific configuration of the upper wall of cavity back club heads.
4. It is improper to use the reference of Peters since Peters nowhere discloses or suggests varying the volume of a recess in a wall from one iron to another in a set of golf clubs.

5. It is improper to combine the reference of Besnard with Peters since Besnard does not disclose or suggest varying recesses in an upper wall to vary the location of the center of gravity of heads from one club to another in a set.
6. It is improper to combine the reference of Besnard with Peters since Besnard discloses gradually reducing mass of a top wall from the heel region towards the toe region and the Applicant's invention does not involve such gradual lightening of the upper wall from a heel to a toe in a single club head.
7. It is improper to combine the reference of Besnard with Peters since Peters nowhere suggests gradually lightening from heel to toe either the upper or lower wall of such a club head.
8. It is improper to combine the reference of Besnard with Peters since Besnard nowhere suggests adding weight inserts to any portion of a head.
9. It is improper to combine the reference of Besnard with Peters since doing so would destroy and render ineffective one or both of the references disclosed.
10. The examiner used hindsight reconstruction of the presently claimed invention to reject the claims without basis in law and fact.

11. It is improper to combine the reference of Besnard with Peters to reject the claimed recess volume of .4 to 5% since neither disclosed or suggested the volumes and the drawings are not presumed to be to scale unless expressly stated to be so.

12. It is improper to combine the reference of Besnard with Peters since Besnard discloses nothing about varying the number or volume of recesses from club to club.

13. With respect to item 1, the argument that it is improper to use the reference of Peters since Peters produces a completed head with no recesses after inserting a weight in an incomplete head is strongly disagreed with. This argument implies that Peters should not be used since it has no recesses and the Applicant's claimed invention does. Throughout Applicant's claims the head is defined as having a recess even if the recess is filled as shown in claim 7. Claim 7 has the recess filled in and it depends on claim 1 which only claims a recess. If claim 1 is a generic claim to a species which reads on claim 7 then the species must also read on the generic claim 1. In other words a head having a recess filled with a material (claim 7) must also read on the generic claim 1 which claims a recess in the upper wall. The examiner is using the same terminology as that which the Applicant uses and as such Peters clearly shows a completed head having a recess. Peters invention happens to have a wall where the recess is filled with a weight. The Applicant's use of terminology is common in the art and the examiner is being consistent to how the applicant uses the word recess and how others in the art have used this terminology.

14. With respect to item 2, the argument that it is improper to use the reference of Peters since Peters in no way suggests the specific structure of the upper wall of each cavity-back, iron-type golf club head as claimed is disagreed with. Peters was not used to show the specific structure of an upper wall. Peters was used to show that it is known to vary the vertical location of the center of gravity (Fig. 30) of a set as defined by the claims (Fig. 31), to use different head designs to assist in varying this center of gravity location (Col. 2, Lns. 49-58, Figs. 3, 5, 7; Figs. 9, 11, 14) and two different designs for a middle iron where the total length and total number of the recesses and the total length and total number of filling materials are different (Figs. 20, 22). With respect to figures 20 and 22 at least one recess will vary in size and volume in the form that the one recess as shown in figure 22 inherently will have a greater volume than one of the recesses as shown in figure 20 even it is assumed that weight 178 is equal to the weights of 174 combined with weight 176 (Figs. 20, 22). Besnard was used to show the teaching that another way to lower the center of gravity (Col. 2, Lns. 34-36) is to have a recess with no dense weight inserted in an upper wall of a cavity-back, iron-type golf club head (Figs. 3-12). Both Peters and Besnard teach how to lower the center of gravity of a cavity-back, iron-type club head using recesses. One chooses to place the recess in the lower wall with dense material (Peters), another chooses to place the recess in the upper wall and keep the recess empty (Besnard) and another chooses to place the recess in the upper wall and fill it with non-dense material (7-213656).

15. With respect to item 3, the argument that it is improper to use the reference of Peters since Peters nowhere even remotely suggests changing the location of the center of gravity of a club head in a set of clubs by specific configuration of the upper wall of cavity back club heads is disagreed with. Peter clearly discloses changing the location of the center of gravity of a club head in a set of clubs by specific differences in head design (Col. 2, Lns. 49-58, Figs. 3, 5, 7; Figs. 9, 11, 14, Figures 30-31). Besnard was used to show that it is known to lower the center of gravity of a head modifying the upper wall (Col. 2, Lns. 34-36). Besnard even shows different levels of modification (Figs. 3, 7, 9 and 10). Clearly one skilled in the art would see this teaching able to be applied to a set of clubs where the center of gravity is changing across a set.

16. With respect to item 4, the argument that it is improper to use the reference of Peters since Peters nowhere discloses or suggests varying the volume of a recess in a wall from one iron to another in a set of golf clubs is disagreed with. First the applicant does not strictly limit the definition of what a set of clubs entails. In the broadest sense the two mid iron clubs 5 and 6 for figure 15 called group 158 meets the definition of a set of clubs. Peters is clearly changing the design of a head in order to achieve the desired center of gravity change from 1 irons to wedges. Peters discloses two different embodiments for a mid iron (Figs. 20, 22). The two different embodiments show different number of recesses and different sizes in the form of different total lengths. Peters is quiet to the any other dimensions shown for these recesses and weights. No matter what reasonable assumptions are made about the recesses (i.e. either the

Art Unit: 3711

combination of weights 174 and 176 equal to the weight 178 or weight 178 is heavier than the combination of weights 174 and 176), a volume of at least one recess in the lower wall will vary between figures 20 and 22. None-the-less, no matter what the intent of Peter was in showing different embodiments of figures 20 and 22, clearly one skilled in the art would considered one obvious possibility is that more weight is placed in the lower portion of the head of figure 22 than the lower portion of figure 20. Since the entire patent of Peters is about changing the vertical center of gravity between groups of heads as well as between heads within a group, it is the examiner's position that one skilled in the art in considering figures 20 and 22 would see a tool in modifying the vertical height of the center of gravity between heads in a group (i.e. set of clubs in group 158) by having different volumes or numbers of recesses in a lower wall which contain dense material. Since Peters leaves room for the size of the face to remain constant throughout a set (Col. 14, Lns. 60-61) this would result in the center of gravity varying in distance to the top of the face where the upper face is located (Fig. 21). The examiner believes due to what was disclosed and what was not disclosed between figures 20 and 22 of Peters, this is an instance where one skilled in the art would bring experience and motivation that would enable one skilled in the art to conclude useful teachings which would be able to be applied in the art of golf head design that were not specifically disclosed by Peters.

17. With respect to item 5, the argument that it is improper to combine the reference of Besnard with Peters since Besnard does not disclose or suggest varying recesses in

number or in volume in an upper wall to vary the location of the center of gravity of heads from one club to another in a set is disagreed with. Besnard was not used to show varying recesses to vary the location of the center of gravity of heads from one club to another in a set but Peters was in combination with the knowledge level of one skilled in the art. Besnard was used to show that it is known to use recesses in an upper wall to vary the location of the center of gravity of heads with respect to the bottom of head (Col. 2, Lns. 27-36). Besnard even shows different modifications of recesses (Figs. 3, 7, 9 and 10). Though Besnard was not used to show varying recesses to vary the location of the center of gravity of heads from one club to another in a set, in the broadest sense and how the term "set" is used in the art Besnard does disclose a set of irons that achieves this. Toulon (2202/0119828) is provided to show what is accepted in the art. Toulon discloses a set of clubs which is made up of the same type of club in the form of a driver ([0047], Table V) where each driver has differences which a golfer can select from. As such Besnard does disclose a set of irons (Figs. 3 and 9-10) with varying recesses in an upper wall both in number and volume (Figs. 3, 9, and 12) which will vary the location of the center of gravity of heads from one club to another in a set.

18. With respect to item 6, the argument that it is improper to combine the reference of Besnard with Peters since Besnard discloses gradually reducing mass of a top wall from the heel region towards the toe region and the applicant's invention does not involve such gradual lightening of the upper wall from a heel to a toe in a single club

Art Unit: 3711

head is disagreed with. Besnard was not used to show that it is known to gradual lightening of the upper wall from a heel to a toe in a single club head. Besnard also teaches that it is known to reduce mass of a top wall in order to lower center of gravity of a single head (Col. 2, Lns. 27-36). Clearly this teaching can be used alone in one head or in a set of heads as Peters discloses (Col. 13, Lns. 36-50, group 158) where there is only the interest to change the vertical height of a center of gravity and no interest to adjust the center of gravity in a heel to toe direction.

19. With respect to item 7, the argument that it is improper to combine the reference of Besnard with Peters since Peters nowhere suggests gradually lightening from heel to toe either the upper or lower wall of such a club head is disagreed with. Peters was not used to show this. Peters was used to show that it is known to use recesses in a lower wall filled with dense material to lower a center of gravity and Besnard was used to show an alternative where recesses in an upper wall were used with no dense material to lower the center of gravity.

20. With respect to item 8, the argument that it is improper to combine the reference of Besnard with Peters since Besnard nowhere suggests adding weight inserts to any portion of a head is disagreed with. There is more than one way to change the weight distribution and center of gravity location of an object. One way is to add weight at a certain location and another is to remove weight at another location achieving the same new location for a center of gravity. Besnard was used to not show the method of



adding weight but to show the method of removing weight. It is an alternative substitute with the motivation to have less parts to assemble for a completed club.

21. With respect to item 9, the argument that it is improper to combine the reference of Besnard with Peters since doing so would destroy and render ineffective one or both of the references disclosed is disagreed with. Both patents are related to moving the center of gravity lower in head. Both patents are related to using recesses to do such. Both show alternative teachings that would be obvious to substitute. Besnard shows a method which would be more advantages for a lighter head and to simplify the assembly process by having fewer parts. Peters shows a method which would be more advantages for a golfer who desires a heavier head to maximize the transfer of power at impact. Both teachings are tools which one skilled in the art has available for designing golf club heads.

22. With respect to item 10, the argument that the examiner used hindsight reconstruction of the presently claimed invention to reject the claims without basis in law and fact is disagreed with. The examiner used what was disclosed in each of the references as well as the knowledge level one skilled in the art would bring to the teachings in the prior art.

23. With respect to item 11, the argument that it is improper to combine the reference of Besnard with Peters to reject the claimed recess volume of .4 to 5% since neither

disclosed or suggested the volumes and the drawings are not presumed to be to scale unless expressly stated to be so are disagreed with. Clearly Besnard has shown volumes for a recess which will lower a center of gravity. Though Besnard does not specifically state what they are it would be wrong to conclude that any volume claimed would be read over Besnard in terms of recess volume needed to lower a center of gravity. And with respect to Peters and it being obvious to use recesses in an upper wall with no dense material to lower a center of gravity, there will be a need of a certain volume of recess to achieve the objectives of Peters of varying the center of gravity. Common sense has to come into play. And clearly though drawings even may be inaccurate the courts have ruled that they still disclose information that is useable. In "In re Seid, 73 USPQ 431" it is reinforced that an accidental disclosure, if clearly made in a drawing, is available as a reference. So in evaluating the drawings of Besnard and specifically the volume of the recesses, the examiner concludes that the volume of recesses Besnard uses to lower the center of gravity would be in the range of .4 to 5% of the volume of the head (Figs. 3-12). And in evaluating Peters where heads in a group show basically similar head designs (Figs. 15, group 158) with the same head size (Col. 14, Lns. 60-61) and small recesses (Fig. 20) yet with the center of gravity decreasing (Fig. 31) it seems that the claimed recess volume and the volume as shown by Besnard (Fig. 9) would be a suitable selection as an alternative way of weighting a head of Peters as shown in figure 20.

Art Unit: 3711

24. With respect to item 12, the argument that it is improper to combine the reference of Besnard with Peters since Besnard discloses nothing about varying the number or volume of recesses from club to club is disagreed with. See item 17 above.

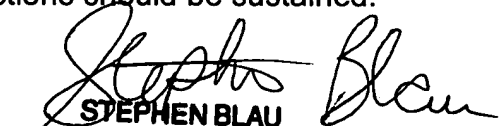
**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

SLB/1 June 2006

  
STEPHEN BLAU  
PRIMARY EXAMINER

Conferees:

Eugene Kim (SPE Art Unit 3711) 

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